

**CLAIMS:** I claim:

1. A means for heating crude oil while being transferred through production tubing, flow lines or field lines, said means comprising of production fluid pumped through or flowing through a section or joint of pipe that is heated.
2. A heating apparatus to be located in the production tubing, flow line or field line at a point determined by evidence of previous paraffin or paraffin-like deposits; heating apparatus comprising an inner hollow core with a plurality of holes, outer case encapsulating inner core, heat source, and connecting electrical supply or steam source, heating apparatus having threaded couplings on each end, compatible with the production tubing, flow line or field line it is to be attached to; an electrical supply or steam source to the heat source; production fluid is pumped through or flows into inner core, disperses through perforations into chamber contacting heat source; whereby such apparatus heats the production fluid to a temperature sufficient to eliminate the solidification of paraffin.